Gold Nanoparticles, Protein L
PRODUCT DATA SHEET

Gold Nanoparticles, Protein L

Description

Protein L is a bacterial protein (from Peptostreptococcus magnus) that binds to the kappa light chains of IgG-type antibodies. However, it does not bind to lambda light chains. As such, Protein L gold conjugates allow for convenient and quick conjugation of antibodies containing a kappa chain to the gold surface, which can then be utilized further downstream. An advantage of Protein L over Protein A and Protein G is that it is capable of binding to single-chain antibody fragments (scFv) and Fab fragments, allowing for finer optimization. Abvigen Protein L conjugated gold nanoparticles are suitable for use in applications such as lateral flow, immunoblotting, light microscopy, and electron microscopy applications procedures for secondary detection of human and mouse kappa chaincontaining antibodies in labeled samples.

Product List

Cat No	Product Name	Concentration	Size
ABGN-5-PL	Gold Nanoparticles, 5 nm, Protein L	OD 3	0.5 mL
ABGN-10-PL	Gold Nanoparticles, 10 nm, Protein L	OD 3	0.5 mL
ABGN-15-PL	Gold Nanoparticles, 15 nm, Protein L	OD 3	0.5 mL
ABGN-20-PL	Gold Nanoparticles, 20 nm, Protein L	OD 3	0.5 mL
ABGN-30-PL	Gold Nanoparticles, 30 nm, Protein L	OD 3	0.5 mL
ABGN-40-PL	Gold Nanoparticles, 40 nm, Protein L	OD 3	0.5 mL
ABGN-50-PL	Gold Nanoparticles, 50 nm, Protein L	OD 3	0.5 mL
ABGN-60-PL	Gold Nanoparticles, 60 nm, Protein L	OD 3	0.5 mL
ABGN-70-PL	Gold Nanoparticles, 70 nm, Protein L	OD 3	0.5 mL
ABGN-80-PL	Gold Nanoparticles, 80 nm, Protein L	OD 3	0.5 mL
ABGN-90-PL	Gold Nanoparticles, 90 nm, Protein L	OD 3	0.5 mL
ABGN-100-PL	Gold Nanoparticles, 100 nm, Protein L	OD 3	0.5 mL

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Characteristics

Core size range: 5 nm ~ 100 nm

Concentration: OD=3

Conjugated protein: Protein L from *Peptostreptococcus magnus*. (expressed in E. coli)

Working dilution: 1:5 ~ 1:100 (application dependent, optimization might be required)

Storage buffer: 10 mM PBS (pH 7.4), 20% glycerol (v/v), 1% BSA

Advantages

Sensitive probe for detection of human and mouse antibodies containing kappa light chains in samples such as serum, tissue culture media and ascites among others.

Binds to a broader range of immunoglobulin classes than Protein A or Protein G. These include IgG, IgM, IgA, IgE and IgD.

Binds single-chain variable fragments (scFv) and Fab fragments that contain kappa light chains.

Does not bind goat or bovine IgG which makes it ideal for the specific detection of human and mouse antibodies produced in tissue culture medium containing Fetal Bovine Serum (FBS).

Applications

Suitable for use in immunoblotting, lateral flow assays, light microscopy, and electron microscopy applications.

Standard Immunogold Dot-Blot Protocol

(Adapted from Moeremans et al.)

1. Spot one microlitre drops of a serial dilution of your protein (1 ug ~ 1 ng) in PBS supplemented with 0.5 µg/mL of BSA on nitrocellulose or PVDF membrane.
2. Let protein drops dry into the membrane.
3. Block Membrane for 30 min using 1% (w/v) dry milk in 1X PBS at room temperature.
4. Incubate with primary antibody for 2 h at room temperature.
5. Wash membrane 3x5 min with blocking solution prepared as above.
6. Incubate for 2 h (or longer for increased sensitivity) with secondary gold conjugate diluted 1:10 (OD=0.3) times with blocking solution (0.2% Blocking Solution).
7. Wash 3x5 min as above.
8. Dry membrane and record data.

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9. (OPTIONAL) Proceed with silver enhancement to improve sensitivity.

Storage and Stability

Store undiluted in storage buffer at 2-8°C. Stable for 4 months if stored as specified.

Storage of conjugate at working dilution may result in performance loss.

DO NOT FREEZE.

Notes

This product is for R&D use only, not for drug, household, or other uses.

Ordering Information

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